

Microelectronics



SAMCO

Separation from the ordinary

PROJECT BRIEF

Microelectronics Company Installs SAMCO's RO-PEDI Ultrapure Water System to Meet Industry Regulations and Improve Product Quality

PROJECT OVERVIEW

At a leading microelectronics company in New York, the client installed SAMCO's cutting edge ultrapure water (UPW) system that utilized reverse osmosis and a portable exchange deionizer (RO-PEDI) for superior oxygen and bacteria removal, bringing the client's water into industry compliance for use in their photoreceptor production line.

OBJECTIVE

Satisfy stringent microelectronic water purity standards and achieve 18+ meg-ohm/cm ultrapure water with significant bacteria and oxygen removal.

SCOPE OF SERVICE

The client worked with SAMCO to develop an effective solution that comprised detailed design/engineering, controls integration, system fabrication, commission, startup, and ongoing maintenance and system support.

CHALLENGES

- High bacteria and oxygen levels
- Stringent industry regulations
- Fast-track project, concept to completion
- Critical application requiring high uptime
- Minimal operator availability

SOLUTION

After installing SAMCO's RO-PEDI system, the client observed marked consistency in ultrapure water quality and maximized ROI. A Jumbo 30 cu. ft. PEDI executed off-site regeneration, and a membrane degasifier efficiently removed CO₂ and O₂—both systems working simultaneously to reduce DI exchange frequency under minimal supervision. A built-in system redundancy resulted in high uptime, and a prepackaged design enabled fast-track, turnkey project delivery that included programmable logic controllers (PLC), automating flow, temperature, pressure, and resistivity monitoring from a remote location.

TECHNOLOGY

Project deliverables and equipment included:

- RO system with storage tank
- Jumbo cu. ft. PEDI
- Triplex sand, duplex bag, and .2 micron filters
- Heat exchanger
- Equalization tank
- Influent booster and transfer pumps
- Chemical feeds
- Membrane degasifier
- Ultraviolet sterilizer
- Catwalks/platforms
- PLC controls/remote telemetry

OVERVIEW

Industry

Microelectronics

Location

New York, US

Objective

Purify city water to meet stringent microelectronics industry standards

Solution

80 GPM Ultrapure RO-PEDI Water System

Need help bringing your water to industry compliance standards? Is water purity an issue? Contact us today at SamcoTech.com • askengineers@samcotech.com • (716) 743 9000